

**3) Does the contaminated soil pose a risk to people on the Site?**

The Human Health Baseline Risk Assessment conducted by EPA in 1992 assumed the future use of the land would be commercial, not residential. The 1992 assessment did not find unacceptable risk to most workers at the site or visitors to the site who came in contact with surface soils, however, the Coordinating Council felt that an assessment of additional areas that are particularly accessible to the public should be done.

An additional fifty soil samples were tested. Testing did not reveal any areas that posed risk greater than that estimated in the original risk assessment.

The 1992 risk assessment did not evaluate the risk of exposures to soils at depths greater than five feet. The Coordinating Council agreed with the EPA that exposures were unlikely; as a result, a second risk assessment on subsurface soils was not performed.

However, because contamination does exist below five feet, institutional controls such as worker protection requirements, deed and zoning restrictions will be implemented.

**4) How significant is ecological risk at the Site?**

Significant ecological risk was found in some areas of the site, but not in others. The Supplemental Baseline Ecological Risk Assessment, completed in 1997,

evaluated certain "indicators" which were selected to provide information regarding the overall health of the ecosystem.

The assessment examined the risk to birds eating insects and fish from the site; the risk to fish from exposure to contaminated sediments; and the risk to bottom dwelling invertebrates and amphibians from exposure to contaminated sediments. Some, but not all, of these organisms showed adverse impacts when exposed to soils and sediments from the site. The information shows that contaminants at the site are causing significant ecological risk in the areas shown in figure 2. These areas were the focus of the evaluation of cleanup alternatives.

**5) Is the Site "healing" itself and is the contamination contained?**

During 1994 and 1995, a series of test were run to answer these questions. The first test confirmed that microorganisms capable of breaking down organic contaminants were present at the site. The second phase of studies tested these microorganism's ability to break down the contamination found at the Pine Street site. The results of these two studies support the hypothesis that gradual "bioremediation" is occurring, particularly at the margins of the site where contamination is less concentrated.

**OPPORTUNITY TO PARTICIPATE**

In addition to the meeting on page one, the public may offer formal comment on the Pine Street Barge Canal Site proposed cleanup plan. The public comment period begins June 5, 1998 and ends July 8, 1998. Written comments may be sent to:

Karen Lumino  
USEPA  
JFK Federal Building/HBT  
Boston, MA 02203  
FAX: 617/573-9662  
e-mail:  
lumino.karen@epamail.epa.gov

The public may also comment formally at the form hearing on June 24, 1998 at 7:00pm at the Contois Auditorium at Burlington City Hall. All comments submitted will be included in the public record and responded to formally by the EPA.

This bioremediation along the margins may be helping to slow the spread of contamination. Microbial degradation may also help to explain why concentrations of organic compounds in surface water are low, despite high levels of sediment contamination.

**Results, continued on pg 5**

**Results, continued  
from page 4**

However, bioremediation by microorganisms cannot eliminate these organic contaminants within a reasonable time frame. Additionally, these microorganisms do not have any effect on metal contamination which is also present at the site.

**Site Remedy, continued.  
from page 1**

3) Monitoring to ensure that contamination left on-site does not reach Lake Champlain or diminish the longterm effectiveness of the cap.

4) Five year reviews would be conducted to insure the remedy remains protective.

The projected cost of the project is \$4.3 million.

**Additional Projects**

If the Council's proposed remedy ultimately is adopted, the Potentially Responsible Parties represented on the Council will contribute to the following, independent additional projects:

1) **Restoration of Englesby Brook.** Erosion control measures, stormwater treatment devices, and source reduction measures would be put in place to reduce discharges of bacteria, sediment, and other pollutants to Englesby Brook and Lake Champlain thereby improving water quality.

2) **Assessment of Water Quality of Burlington Bay.** Funding would be used to determine the current status of the Bay and to track changes related to pollution prevention programs like the Englesby Brook restoration. The information developed during the assessment would be made available to citizens and policy makers through a series of outreach efforts.

3) **Barge Canal Interpretive Trails.** This project would provide safe access to certain portions of the site through a series of connected boardwalks and trails. The trails would include interpretive signs to educate visitors on the natural and cultural history of the area.

4) **Economic Redevelopment.** The project would fund a site-wide engineering study in order to encourage redevelopment and reuse of the Barge Canal site in a manner protective of the remedy.

The total estimated costs for implementing these additional projects is approximately \$3 million to be spend over a 5-year period. The Potentially Responsible Parties have tentatively agreed to fund the projects in addition to paying for and implementing the cleanup remedy at the Pine Street Superfund site.

**City of Burlington Receives Brownfields Grants**

The EPA recently awarded the City of Burlington a second Brownfields grant of \$200,000. To redevelop abandoned contaminated properties. This is the second \$200,000 grant awarded to the City under EPA's Brownfields Initiative. The first was awarded in 1996.

Brownfields are defined as sites where real or perceived contamination have caused barriers to redevelopment. The aim of EPA's grant is to inventory, assess, and prepare strategies for redevelopment of brownfields.

The City will use the money will to assess sites such as the former Exxon headquarters on Flynn Avenue and to help plan for Riverside Eco-Park near the Burlington Intervale. The City also might use the money to study redevelopment of portions of the Pine Street Barge Canal Site.

The Pine Street Coordinating Council has proposed that portions of the Pine Street Superfund Site be redelineated to facilitate redevelopment of non-contaminated areas.

The brownfields grant is being administered by the Burlington Community and Economic Development Office. Project Manager Nick Warner can be reached at (802)865-7173 (faxes to (802)865-7024).

### **Vermont residents recognized for hard work.**

John Akey, Lori Fisher, Marty Feldman, Bill Howland, Al McIntosh, and Mary Watzin were awarded Environmental Merit Awards by the United States Environmental Protection Agency, Region I at the annual Earth Day awards ceremony on April 25 in Boston. These Vermonters were recognized for their dedication and hard work on the Pine Street Canal Superfund Site project. As advocates for Vermont citizens, business groups and environmental organizations, these individuals brought unique perspectives to the table in designing the studies that would be necessary for selecting an appropriate remedy for the site.

### **Available Reports**

The following reports are, or will soon be available, along with all previous reports in the Administrative Record for the site, at the Fletcher Free and UVM (Reserve Section) libraries and at the EPA Region I Superfund Records Center, 90 Canal Street, Boston, MA 02203 phone: (617) 573-5729. The Administrative Record contains copies of technical reports as well as fact sheets and site updates.

*Additional Remedial Investigative Report, Pine Street Canal Barge Superfund Site, Burlington, Vermont, Johnson Company, July 1997.* This report evaluates the results of all previous field investigations conducted at the site to present the nature and extent of contamination found at Pine Street Barge Canal Site. This report also presents an in-depth description of the most recent work conducted in 1994 and 1995. In-depth discussion of previously conducted work is contained in the Administrative Record. Additionally, this report presents the position papers that address the human health exposure questions raised by the Coordinating Council. The data in this report provided the basis for the Supplemental Baseline Ecological Risk Assessment and Additional Feasibility Study (AFS).

*Supplemental Baseline Ecological Risk Assessment, Roy F. Weston, Inc. July 1997* This report evaluates the chemical, physical, and biological data from the Site, examines the results of the sediment toxicity tests, and, using a weight-of-evidence approach, draws conclusions about baseline ecological risk at the site. These results, along with those of the AFS, are being used to identify remedies that may be appropriate.

*Natural Biodegradation Evaluation at the Pine Street Canal Site, Burlington, VT, Remediation Technologies, Inc., April 1995.* Soil, sediment, and water samples were collected from the site for a series of bacteriological tests to examine the hypothesis that microorganisms adapted to Site conditions and capable of breaking down the contaminants of concern exist at the Site.

*Initial Screening of Remedial Alternatives, Pine Street Canal Site, Burlington, Vermont, GEI Consultants, Inc., February, 1996.* This report represents the first step in the Additional Feasibility Study. It examines a list of possible remedial technologies and makes recommendations for those technologies that should be examined in more detail in the AFS.

*Intrinsic and Enhanced Bioremediation Assessments, Pine Street Canal Site, Burlington, Vermont, RETEC Remediation Technologies, Inc., December, 1996.* This report builds on the Natural Biodegradation Evaluation and documents the results of bioremediation laboratory studies.

*Draft Additional Feasibility Study Report, Pine Street Canal Site, Burlington, Vermont, RETEC Remediation Technologies, Inc.* This report, which should be available to the public by November, will examine in detail remediation options that were identified in the initial screening report. It will also present the Remedial Action Objectives and Preliminary Remediation Goals developed by the Coordinating Council. The results will be used to recommend a remedy for the Site.

## Pine Street Barge Canal Coordinating Council

### *Progress Update #4* October 1998

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*The Pine Street Coordinating Council represents a first-of-its-kind effort that includes a diverse cross section of local citizens, environmental groups, the potentially responsible parties and local state and federal representatives working together to reach consensus on a cleanup remedy. If the Coordinating Council approach is successful in Burlington, the process may be duplicated at other sites around the country.*

## EPA Selects Cleanup Plan for the Pine Street Canal Superfund Site

### The Cleanup Remedy

The EPA has officially adopted a \$4.38 million cleanup plan for the Pine Street Canal Superfund site. The plan was developed in collaboration with the Pine Street Barge Canal Coordinating Council.

During a ceremony held last May, the Coordinating Council formally recommended to EPA-New England Regional Administrator John P. DeVillars, that the Agency adopt a cleanup plan for the site that includes capping, long-term monitoring and institutional controls for groundwater and land use development.

EPA accepted the Council's recommendation and on May 27, 1998 released the proposed plan.

Before being selected, the plan however still had to undergo broader public review and comment.

In June, the EPA and Council held an informational meeting at City Hall in Burlington which kicked off the public comment period.

From June and until the close of the comment period in August, the EPA solicited formal public comment. Overall, the public response to the plan was favorable. Having attained the public's acceptance, EPA approved the plan.

Questions and concerns about the cleanup process or schedule may be directed to EPA Project Manager Karen Lumino. Karen may be reached at EPA's toll free number at: 1-888-372-7341.



Coordinating Council member Lori Fisher presented the Council recommendation on the Pine Street cleanup plan to EPA Regional Administrator John DeVillars at a ceremony held at the Pine Street site in May.



## Community Based Environmental Decision Making ... A Success Story

Here and across the country, citizens are playing an increasingly active role in addressing major environmental problems in their communities.

Rather than make decisions without community input, Federal and State regulatory agencies are involving key stakeholders in the decision-making process. Partnering with people at the local level allows EPA to find cost effective sensible solutions to a variety of local environmental problems.

The Pine Street Barge Canal Coordinating Council are among the pioneers of community based decision making. Since 1993, members of the Burlington business, art and environmental community met regularly with the EPA, the US Fish and Wildlife Service and Vermont Department of Environmental Conservation, to develop a cleanup plan for the Pine Street site.

Five years later, we have a cleanup plan that is acceptable to the community and environmental regulators. EPA anticipates that the work on site will begin by the year 2000.

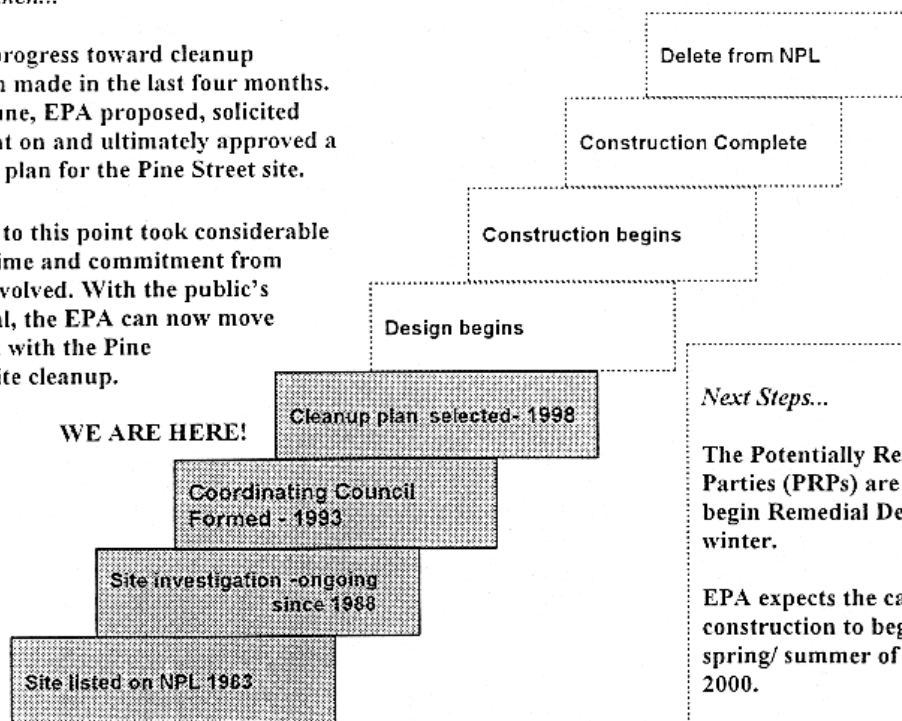
### *Cleanup Progress at Pine Street*

#### *Steps Taken...*

Major progress toward cleanup has been made in the last four months. Since June, EPA proposed, solicited comment on and ultimately approved a cleanup plan for the Pine Street site.

Getting to this point took considerable effort, time and commitment from those involved. With the public's approval, the EPA can now move forward with the Pine Street site cleanup.

**WE ARE HERE!**



#### *Next Steps...*

The Potentially Responsible Parties (PRPs) are expected to begin Remedial Design this winter.

EPA expects the cap construction to begin during the spring/ summer of the year 2000.

### *Where you can go for more information...*

This publication summarizes a number of reports and studies. All of these technical reports as well as other public information publications are available at the following Pine Street Canal site information repositories:

Fletcher Free Public Library  
235 College St.  
Burlington, VT 05401  
(802)863-3403  
Hours:  
M-F: 8:30am-5:30pm  
Sat : 9:00am-5:30pm  
Sun: 12:00-5:45pm (Sept.-May)

Bailey/Howe Library  
University of Vermont  
Burlington, VT 05405  
(802) 656-2023  
Hours:  
M-F: 8:00 am-12:00am  
Sat: 9:00am-12:00am

EPA Records Center  
One Congress Street  
Boston, MA 02203  
(617)573-5729  
Hours:  
M-F: 10:00am-1:00pm  
2:00pm -5:00pm  
Note: The EPA Record center is  
closed the first Friday of every  
month.

For general Superfund information, Internet users may visit EPA's  
web page at: <http://www.epa.gov/region01/superfund>



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UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
JFK Federal Building/ RAA  
Boston, MA 02203

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